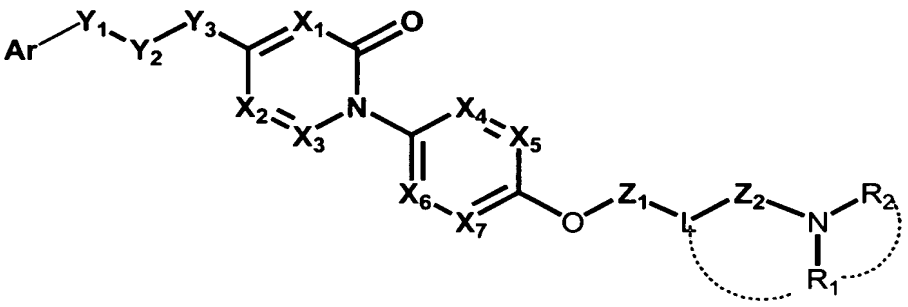
CLAIMS

1. Pyridone derivatives represented by a general formula (I)



(1)

[in the formula,

R_1 and R_2 may be same or different and each stands for hydrogen, optionally substituted lower alkyl, optionally substituted lower cycloalkyl, optionally substituted lower alkylcarbonyl, optionally substituted lower alkyloxycarbonyl or optionally substituted lower alkylsulfonyl; or R_1 and R_2 may form an optionally substituted aliphatic nitrogen-containing heterocyclic group together with the nitrogen atom to which they bind;

X_1, X_2 and X_3 may be same or different, each standing for optionally substituted methine or nitrogen atom, provided not all of X_1, X_2 and X_3 simultaneously stand for nitrogen,

X_4, X_5, X_6 and X_7 may be same or different and each stands for optionally substituted methine or nitrogen, provided that three or more of X_4, X_5, X_6 and X_7 do not simultaneously stand for nitrogen;

Y_1 stands for a single bond, –O–, –NR–, –S–, –SO– or $–SO_2–$,

Y_2 stands for optionally substituted lower alkylene, optionally substituted lower alkenylene or optionally substituted lower cycloalkylene;

Y_3 stands for a single bond, –O–, –NR–, –S–, –SO– or $–SO_2–$;

R stands for hydrogen or optionally substituted lower alkyl,

L stands for optionally substituted methylene,

Z_1 and Z_2 may be same or different and each stands for a single bond or optionally substituted lower alkylene;

R_1, L and Z_2 may together form an optionally substituted aliphatic nitrogen-containing heterocyclic group with the nitrogen to which R_1 binds;

and

Ar stands for an optionally substituted aromatic carbocyclic group, optionally substituted heteroaromatic group or optionally substituted aliphatic carbocyclic group]

or pharmaceutically acceptable salts thereof.

2. Compounds as set forth in Claim 1, in which all of X_1, X_2 and X_3 are optionally substituted methine groups.

3. Compounds as set forth in Claim 2, in which all of X_1, X_2 and X_3 are unsubstituted methine groups.

4. Compounds as set forth in Claim 1, in which any one of X_1, X_2 and X_3 is nitrogen atom and the other two are optionally substituted methine groups.

5. Compounds as set forth in Claim 4, in which any one of X_1, X_2 and X_3 is nitrogen atom and the other two are unsubstituted methine groups.

6. Compounds as set forth in any one of Claims 1 – 5, in which all of X_4, X_5, X_6 and X_7 are optionally substituted methine groups.

7. Compounds as set forth in any one of Claims 1 – 6, in which Y_1 is a single bond or –O–.

8. Compounds as set forth in any one of Claims 1 – 7, in which Y_2 is optionally substituted methylene, optionally substituted ethylene or optionally substituted vinylene.

9. Compounds as set forth in any one of Claims 1 – 8, in which Y_3 is a single bond or –O–.

10. Compounds as set forth in any one of Claims 1 – 9, in which Z_1 is a single bond or optionally substituted methylene.

11. Compounds as set forth in Claim 10, in which L is optionally substituted methylene.

12. Compounds as set forth in Claim 10 or 11, in which Z_2 is a single bond or optionally substituted methylene.

13. Compounds as set forth in any one of Claims 1 – 10, in which R_1, L and Z_2 together form an optionally substituted pyrrolidine ring or an optionally substituted piperidine ring, with the nitrogen to which R_1 binds.

14. Compounds as set forth in Claim 13, in which R_2 is hydrogen, optionally substituted $C_1 - C_4$ alkyl or optionally substituted $C_3 - C_5$ cycloalkyl.

15. Compounds as set forth in any one of Claims 1 – 12, in which R_1 and R_2 are same or different, and each stands for hydrogen, optionally substituted $C_1 - C_4$ alkyl or optionally substituted $C_3 - C_5$ cycloalkyl.

16. Compounds as set forth in any one of Claims 1 – 13, in which R_1 and R_2 together form an optionally substituted pyrrolidine ring or an optionally substituted piperidine ring, with the nitrogen atom to which they bind.

17. Compounds as set forth in any one of Claims 1 – 16, in which Ar is an optionally substituted phenyl or optionally substituted pyridinyl.

18. Compounds as set forth in Claim 17, in which the substituent is selected from the group consisting of fluorine, chlorine, methyl, ethyl, hydroxyl, methoxy, ethoxy, trifluoromethyl, difluoromethoxy and trifluoromethoxy.

19. A compound selected from the group consisting of:
4-benzyloxy-1-{4-[2-(dimethylamino)ethoxy]phenyl}-1H-pyridin-2-one
4-benzyloxy-1-{4-[2-(diethylamino)ethoxy]phenyl}-1H-pyridin-2-one
1-{4-[2-(diethylamino)ethoxy]phenyl}-4-(4-fluorobenzyloxy)-1H-pyridin-2- one
4-(4-fluorobenzyloxy)-1-{4-[2-(diethylamino)ethoxy]phenyl}-1H-pyrimidin-2-one
4-[(5-chloro-2-pyridinyl)methoxy]-1-{4-[2-(dimethylamino)ethoxy]phenyl}- 1H-pyridin-2-one
4-[(5-chloro-2-pyridinyl)methoxy]-1-{4-[2-(diethylamino)ethoxy]phenyl}-1H-pyridin-2-one

4-[(5-chloro-2-pyridinyl)methoxy]-1-(4-{2- [ethyl(methyl)amino]ethoxy}- phenyl)-1H-pyridin-2-one

4-[(5-chloro-2-pyridinyl)methoxy]-1-(4-{2-[isopropyl(methyl)amino]- ethoxy}phenyl)-1H-pyridin-2-one

4-(4-fluorobenzyloxy)-1-(4-{2-[isopropyl(methyl)amino]ethoxy}phenyl)-1H- pyridin-2-one

4-[(5-chloro-2-pyridinyl)methoxy]-1-{4-[2-(isopropylamino)ethoxy]phenyl}- 1H-pyridin-2-one

4-[(5-chloro-2-pyridinyl)methoxy]-1-(4-{2-[(2R)-2-butylamino]ethoxy}- phenyl)-1H-pyridin-2-one

4-[(5-chloro-2-pyridinyl)methoxy]-1-(4-{2-[(2S)-2-butylamino]ethoxy}- phenyl)-1H-pyridin-2-one,

4-[(5-chloro-2-pyridinyl)methoxy]-1-{4-[2-(cyclopentylamino)ethoxy]phenyl}-1H-pyridin-2-one,

and pharmaceutically acceptable salts thereof.

20. A compound selected form the group consisting of:

4-benzyloxy-1-(4-{[(2S)-1-methyl-2-pyrrolidinyl]methoxy}phenyl)-1H- pyridin-2-one

4-[(5-chloro-2-pyridinyl)methoxy]-1-{4-[(2R)-2-(diethylamino)propoxy]-phenyl}-1H-pyridin-2-one

4-[(5-chloro-2-pyridinyl)methoxy]-1-{4-[(2S)-2-(diethylamino)propoxy]- phenyl}-1H-pyridin-2-one

4-[(5-chloro-2-pyridinyl)methoxy]-1-(4-{[(2S)-1-isopropyl-2-pyrrolidinyl]- methoxy}phenyl-1H-pyridin-2-one

4-[(5-chloro-2-pyridinyl)methoxy]-1-(4-{[(2S)-1-methyl-2-pyrrolidinyl]- methoxy}phenyl)-1H-pyridin-2-one

4-[(5-chloro-2-pyridinyl)methoxy]-1-(4-{[(2S)-1-ethyl-2-pyrrolidinyl]- methoxy}phenyl)-1H-pyridin-2-one

4-[(5-chloro-2-pyridinyl)methoxy]-1-{4-[(2R)-2-(dimethylamino)propoxy]- phenyl}-1H-pyridin-2-one

4-[(5-chloro-2-pyridinyl)methoxy]-1-{4-[(2S)-2-(dimethylamino)propoxy]- phenyl}-1H-pyridin-2-one

4-[(5-chloro-2-pyridinyl)methoxy]-1-{4-[(2R)-2-(1-pyrrolidinyl)propoxy]- phenyl}-1H-pyridin-2-one

4-[(5-chloro-2-pyridinyl)methoxy]-1-{4-[(2S)-2-(1-pyrrolidinyl)- propoxy]phenyl}-1H-pyridin-2-one,

and pharmaceutically acceptable salts thereof.

21. A compound selected from the group consisting of:

4-benzyloxy-1-{4-[2-(1-pyrrolidinyl)ethoxy]phenyl}-1H-pyridin-2-one

4-(4-fluorobenzyloxy)-1-{4-[2-(1-pyrrolidinyl)ethoxy]phenyl}-1H-pyridin-2- one

4-[(5-chloro-2-pyridinyl)methoxy]-1-{4-[2-(1-pyrrolidinyl)ethoxy]phenyl}- 1H-pyridin-2-one

4-[(E)-2-(4-fluorophenyl)vinyl]-1-{4-[2-(1-pyrrolidinyl)ethoxy]phenyl}-1H- pyridin-2-one

4-[(E)-2-phenylvinyl]-1-{4-[2-(1-pyrrolidinyl)ethoxy]phenyl}-1H-pyridin-2- one

4-(4-chlorobenzyloxy)-1-{4-[2-(1-pyrrolidinyl)ethoxy]phenyl}-1H-pyridin-2- one

4-(4-fluorobenzyloxy)-1-{4-[2-(1-pyrrolidinyl)ethoxy]phenyl}-1H-pyrimidin- 2-one

4-[(5-chloro-2-pyridinyl)methoxy]-1-(4-{[(3R)-1-isopropyl-3-pyrrolidinyl]- oxy}phenyl)-1H-pyridin-2-one

4-[(5-chloro-2-pyridinyl)methoxy]-1-(4-{[(3R)-1-ethyl-3-pyrrolidinyl]oxy}- phenyl)-1H-pyridin-2-one

4-[(5-chloro-2-pyridinyl)methoxy]-1-(4-{[(3R)-1-methyl-3-pyrrolidinyl]- oxy}phenyl)-1H-pyridin-2-one,

and pharmaceutically acceptable salts thereof.

22. Melanin concentrating hormone receptor antagonistic agents characterized by containing the compounds as set forth in any one of Claims 1 – 21 as the active component.

23. Pharmaceutical compositions characterized by containing the compounds as set forth in any one of Claims 1 – 21 and pharmaceutically acceptable adjuvants.

24. Preventive, treating or therapeutic agents of metabolic disorders represented by obesity, diabetes, hormone disorder, hyperlipidemia, gout, fatty liver, and the like; cardiovascular disorders, represented by stenocardia, acute or congestive heart failure, myocardial infarction, coronary atherosclerosis, hypertension, renal diseases and electrolyte abnormality; central nervous system or peripheral nervous system disorders represented by bulimia, emotional disturbance, depression, anxiety, epilepsy, delirium, dementia, schizophrenia, attention-deficit hyperactivity disorder, memory impairment, sleep disorders, cognitive failure, dyskinesia, paresthesias, smell disorders, morphine tolerance, drug

dependence and alcoholism; reproductive disorders represented by infertility, preterm labor and sexual dysfunction; digestive disorders; respiratory disorders; cancer or pigmentation, characterized by containing the compounds as set forth in any one of Claims 1 – 21 as the active component.

25. Method of treating diseases in which melanin concentrating hormone participates, characterized by administering the compound(s) as set forth in any one of Claims 1 – 21.